

4705

**CHEVRON ORLANDO SITE  
SUPERFUND ACCELERATED CLEANUP MODEL  
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY  
SAMPLING AND ANALYSIS PLAN AMENDMENT NO. 2**

**PURPOSE AND SCOPE**

This Sampling and Analysis Plan Amendment No. 2 (SAPA No. 2) describes the additional data collection and analytical procedures to be employed for the Chevron Orlando site Remedial Investigation and Feasibility Study (RI/FS). This SAPA No. 2 includes, by reference, the procedures and protocols presented in the Sampling and Analysis Plan (BCC, 1991) and the Sampling and Analysis Plan Amendment [SAPA (TASK, 1993)]; the Quality Assurance Project Plan (BCC, 1991) and the Quality Assurance Project Plan Amendment (TASK, 1993); and the Site Safety and Health Plan (BCC, 1991) and the Site Safety and Health Plan Amendment (TASK, 1993).

The Phase 1 field activities were conducted in accordance with the Administrative Order by Consent (AOC) Scope of Work, and included collection and analysis of groundwater samples from the nine monitor wells which remained following the removal action. The results of the Phase 1 field activities were used to develop a preliminary aquifer simulation computer model, to predict the potential magnitude and extent of the contaminant plume in the groundwater. The Phase 2 field activities were initiated on August 10, 1993 and concluded on October 13, 1993. During the Phase 2 field activities, 17 monitor wells were constructed, and the new and existing monitor wells sampled. A variety of geochemical samples were collected, to include aquifer matrix and groundwater samples for partition coefficient (Kd) determination and bioavailability studies. Twelve soil samples were collected from the trailer park to the north of the site, and a pumping test was conducted on the site to more accurately measure the characteristics of the surficial aquifer.

The Phase 2 analytical results, which are currently undergoing data validation, identify chlordane, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, and endrin in surface soils in the southwest corner of the Armstrong Trailer Park. The analytical results for the soil samples collected from the trailer park are summarized on Table 1-1. The Phase 2 soil sample locations are shown of Figure 1.

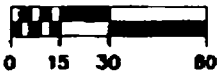
The purpose of this SAPA No. 2 is to amend the SAPA (TASK, 1993) to address the collection and analysis of additional soil samples from the Armstrong Trailer Park. The additional soil sample data will be used to define the areal extent of contaminated soil which will be removed from the park.

**TABLE 1-1 SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS  
CHEVRON ORLANDO SITE  
SEPTEMBER 1993**

Parameter		SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-106	SS-071	SS-072	SS-081	SS-082	SS-09	SS-10
Chromium-6010/ICP	mg/kg	4	6	4	7	11	8	7	5	<3	<3	<3	11	3
Lead 7421	mg/kg	110	15	85	65	120	130	120	85	13	12	8.9	40	32
Dieldrin	ug/kg	18	<4	<40	<80	14	<4	<4	1200	32	<200	<40	<80	<4
Endrin	ug/kg	<8	<8	<80	<160	<8	<8	<8	<800	<8	<400	<80	110	<8
4,4-DDD	ug/kg	9	<5	<50	<100	23	<5	<5	<500	20	<250	<50	<100	<5
4,4-DDT	ug/kg	110	<5	370	380	120	110	110	1500	76	410	150	<100	65
4,4-DDE	ug/kg	52	<4	310	<80	96	280	190	1300	<4	580	84	180	90
Endosulfan Sulfate	ug/kg	<20	<20	<200	<400	<20	<20	<20	<2000	<20	<1000	<200	<400	<20
Chlordane	ug/kg	620	83	690	3400	890	660	670	37000	660	7600	1400	5700	420
Acetone	ug/kg	<10	<10	88	<10	<10	<10	<10	<10	<10	180	14	<10	<10
2-Butanone (MEK)	ug/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	17	<10	<10	<10
Methylene Chloride	ug/kg	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	6.4	<5	<5
4-Methyl-2-Pentanone (MIBK)	ug/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10
Bis(2-ethyl hexyl)phthalate	ug/kg	<330	1540	<330	<330	<330	<330	<330	<330	<330	<330	<330	1000	<330
Di-n-butyl phthalate	ug/kg	<330	<330	470	1900	<330	<330	<330	<330	<330	<330	<330	<330	<330

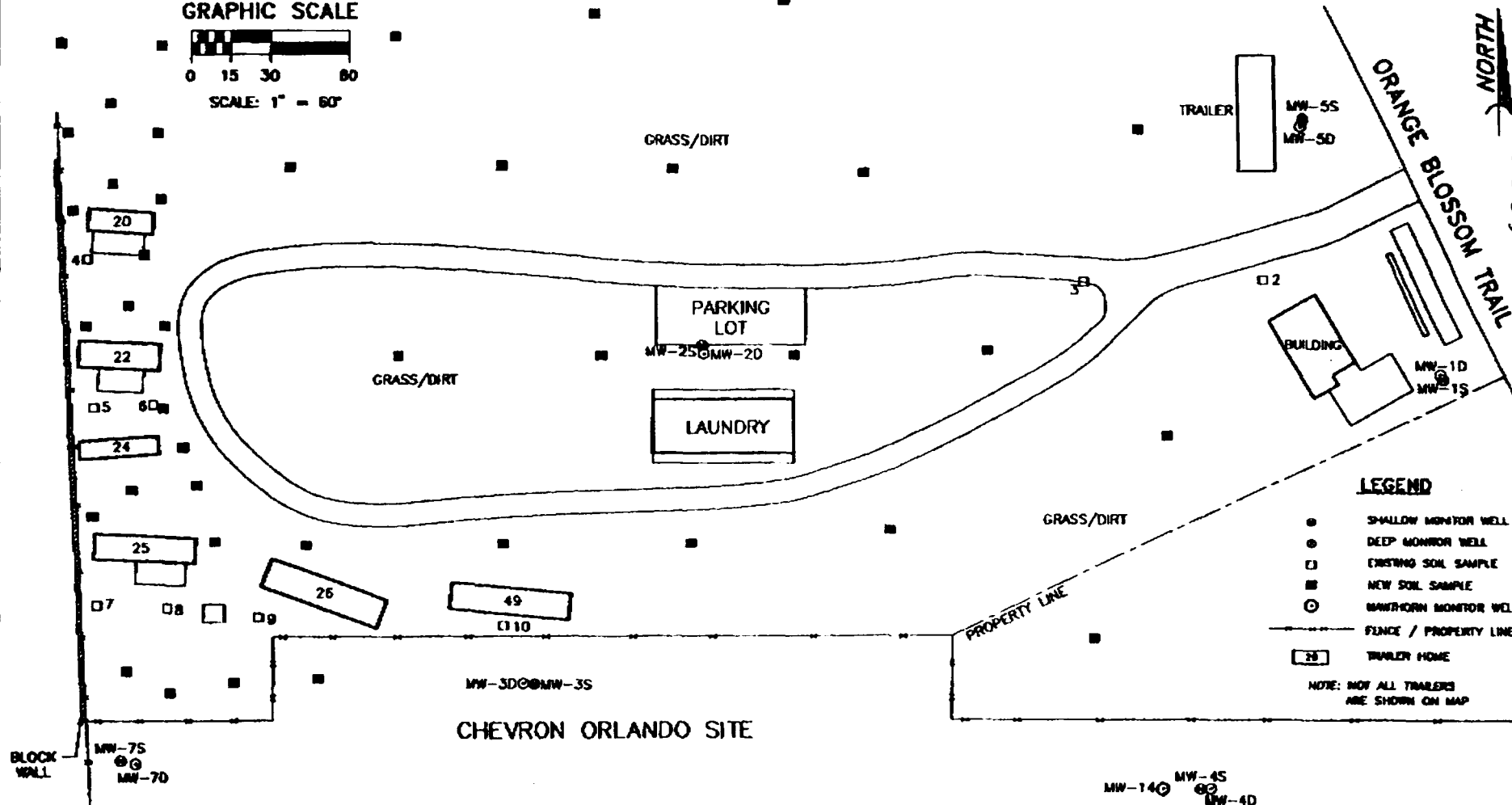
3 2 0058

# GRAPHIC SCALE



SCALE: 1" = 60'

3 2 0059  
NORTH



Proj. No.: E0026

Checked By:

Approved By:

Date: 11/12/93

Scale: 1" = 60'

Figure: 1

**TASK**  
ENVIRONMENTAL

CHEVRON ORLANDO SITE  
SOIL SAMPLING LOCATIONS

The sampling protocol and procedures to be employed during the Phase 2b field activities are as described in Section 2.2.3 of the SAPA.

### **SOIL SAMPLING PLAN**

TASK Environmental, Inc. (TASK) will collect 44 surficial soil samples from 40 locations within the trailer park, as shown on Figure 1. The soil sample locations were selected to provide data for two purposes. The soil sample locations in the southwest corner of the trailer park are located on a tightly spaced grid that is geostatistically biased to assess the contaminant distribution in the area of stormwater pooling adjacent to the concrete block wall. A larger grid spacing was developed for the sample locations across the remainder of the park, to provide the additional soil quality data needed for the risk assessment.

The soil samples will be collected from 0 to 3-inches below land surface (BLS) from 40 locations, using decontaminated stainless steel spoons. Soil samples will also be collected at 12-inches BLS at four locations within the southwest corner of the park. Each soil sample will be mixed in a decontaminated glass pan, using the quarter-mix method, and transferred to the appropriate sample container. Prior to collection of each sample, the vegetation will be removed from the area to be sampled. Soil samples will be analyzed for chlorinated pesticides using EPA Method 8080.

Quality assurance samples will be collected to include four duplicate soil samples, four equipment blanks, and one field blank. The quality assurance samples will also be analyzed for chlorinated pesticides using EPA Method 8080. All laboratory analysis will be conducted by Pace, Inc., in accordance with the methods specified in the QAPP (BCC, 1991) and the QAPPA (TASK, 1993).